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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,843	06/05/2006	Nicolas Giraud	09669/087001	4605

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EXAMINER

DOAN, TRANG T

ART UNIT	PAPER NUMBER
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2431

NOTIFICATION DATE	DELIVERY MODE
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06/23/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/581,843	Applicant(s) GIRAUD ET AL.	
	Examiner TRANG DOAN	Art Unit 2431	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-18, 20-23 and 25-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-18, 20-23 and 25-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the amendment filed on 04/07/2009.
2. Claims 12-16, 20, 22 and 27 have been amended.
3. Claims 1-11, 19 and 24 have canceled.
4. Claims 12-18, 20-23 and 25-28 are pending for consideration.

Response to Arguments

5. Applicant's arguments with respect to claims 12-18, 20-23 and 25-28 have been considered but are moot in view of the new ground(s) of rejection.
6. Applicant's arguments with respect to the 35 U.S.C. 101 rejection and objection to the specification have been fully considered in view of the amendment filed on 04/07/2009, which have been made in record, and the 35 U.S.C. 101 rejection and objection to the specification have been withdrawn.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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8. Claims 12-18 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Dwyer (US 2004/0015748) (hereinafter Dwyer).

9. Regarding claim 12, Dwyer discloses a method for verifying execution of a program, wherein the program comprises a first code portion and a second code portion, the method comprising: entering the first code portion, wherein the first code portion comprises a first plurality of instructions (Dwyer: see figures 1-2 and paragraph 0027); executing, by a processor, the first code portion (Dwyer: paragraph 0036); calculating a first checksum during the execution of the first code portion, wherein the first checksum is calculated using information associated with at least one of the first plurality of instructions (Dwyer: see figures 1-2 and paragraph 0040); comparing the first checksum to a first pre-calculated checksum prior to exiting the first code portion, wherein the first pre-calculated checksum is calculated during compilation of the program (Dwyer: paragraphs 0022, 0039, 0045 and 0055: The checksum code then proceeds to identify whether the checksum in the statically allocated object, procedure or function call matches the checksum in the array at step 133); and exiting the first code portion and entering the second code portion if the first checksum equals the first pre-calculated checksum (Dwyer: paragraphs 0022 and 0056).

Regarding claim 13, Dwyer further discloses entering the second code portion when the first checksum equals the first pre-calculated checksum, wherein the second code portion comprises a second plurality of instructions (Dwyer: paragraphs 0055-0056); executing the second code portion (Dwyer: paragraphs 0055-0056); calculating a second checksum during the execution of the second code portion, wherein the second

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checksum is calculated using information associated with at least one of the second plurality of instructions (Dwyer: paragraphs 0055-0056); comparing the second checksum to a second pre-calculated checksum prior to exiting the second code portion; and exiting the second code portion if the second checksum equals the second pre-calculated checksum (Dwyer: paragraphs 0055-0056).

Regarding claim 14, Dwyer further discloses detecting an anomaly if the first checksum is not equal to the first pre-calculated checksum (Dwyer: paragraph 0055: if it is determined at step 134 that the checksums do not match, then the checksum code 130 generates an error message of checksum mismatch).

Regarding claim 15, Dwyer further discloses wherein a last instruction in the first plurality of instructions to be executed prior to exiting the first code portion is modified to comparing the first checksum to the first pre-calculated checksum (Dwyer: paragraph 0056).

Regarding claim 16, Dwyer further discloses wherein comparing the first checksum to a first pre-calculated checksum is performed after all of the first plurality of instructions have been executed (Dwyer: paragraph 0055).

Regarding claim 17, Dwyer further discloses wherein the information associated with the at least one of the first plurality of instructions comprises at least one selected from the group consisting of content of the at least one of the first plurality of instructions, a type of the at least one of the first plurality of instructions, a function performed by the at least one of the first plurality of instructions, and a result generated

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by executing of the at least one of the first plurality of instructions (Dwyer: see figure 2 and paragraph 0027).

Regarding claim 18, Dwyer further discloses wherein the first code portion is bounded by at least one pair selected from the group consisting of an entry point and an exit point, a first jump address and a second jump address, a first branch jump and a second branch jump, a routine call and a corresponding return instruction, entry to interruption handling and exit from interruption handling (Dwyer: paragraphs 0029, 0034 and 0055).

Regarding claim 20, this claim has limitations that is similar to those of claim 12, thus it is rejected with the same rationale applied against claim 12 above.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dwyer in view of Luu (US 2002/0023963) (hereinafter Luu).

Regarding claim 21, Dwyer does not disclose a card comprising the electronic module of claim 20. However, Luu discloses a card comprising the electronic module of claim 20 (Luu: see figure 5 A-B and paragraph 0024). Therefore, it would have been obvious to a person skilled art at the time the invention was made to have included in

Dwyer the feature of Luu as discussed above for providing access to goods, services, and information (Luu: paragraph 0003).

12. Claims 22-23 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dwyer in view of Shavit et al. (US 5586321) (hereinafter Shavit).

Regarding claim 22, a method for verifying execution of a program, wherein the program comprises a first routine and a second routine, the method comprising: entering the first routine, wherein the first routine comprises a plurality of instructions and each of the plurality of instructions is associated with a value (Dwyer: see figures 1-2 and paragraph 0027); initializing a counter associated with the first routine, prior to executing the first routine (Dwyer: paragraph 0036); executing, by a processor, the first routine, wherein the counter is incremented by the value associated with each of the plurality of instructions executed during the execution of the first routine (Dwyer: see figures 1-2 and paragraph 0040); comparing a value of the counter to a pre-calculated value prior to exiting the first routine (Dwyer: paragraphs 0022, 0039, 0045 and 0055: The checksum code then proceeds to identify whether the checksum in the statically allocated object, procedure or function call matches the checksum in the array at step 133); exiting the first routine and entering the second routine if the value of the counter equals the pre-calculated value (Dwyer: paragraphs 0022 and 0056).

Dwyer does not disclose wherein the first routine comprises a first branch and a second branch, and wherein the first branch and the second branch are balanced to have the value of the counter resulting from executing instructions in the first branch

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equal to the value of the counter resulting from executing instructions in the second branch.

However, Shavit discloses wherein the first routine comprises a first branch and a second branch, and wherein the first branch and the second branch are balanced to have the value of the counter resulting from executing instructions in the first branch equal to the value of the counter resulting from executing instructions in the second branch (Shavit: see figure 5, column 8 lines 25-48 and column 9 lines 32-44).

Therefore, it would have been obvious to a person skilled art at the time the invention was made to have included in Dwyer the feature of Shavit as discussed above because there is thus a widely recognized need for, and it would be highly advantageous to have, apparatus overcoming the above-mentioned disadvantages of shared counters, shared pools, shared stacks and the like in multi-processor environments (Shavit: column 2 lines 17-21).

Regarding claim 23, Dwyer as modified discloses detecting an anomaly if the value of the counter is not equal to the first pre-calculated value (Dwyer: paragraph 0055: if it is determined at step 134 that the checksums do not match, then the checksum code 130 generates an error message of checksum mismatch).

Regarding claim 25, Dwyer as modified discloses wherein the value associated with each of the plurality of instructions is unique (Dwyer: paragraph 0020).

Regarding claim 26, Dwyer as modified discloses wherein the value associated with a first one of the plurality of instructions is the same as the value associated with a second one of the plurality of instructions, if a type of the first one of the plurality of

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instructions is the same as a type of the second one of the plurality of instructions (Dwyer: paragraph 0055).

Regarding claim 27, this claim has limitations that is similar to those of claim 22, thus it is rejected with the same rationale applied against claim 22 above.

13. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dwyer in view of Shavit, and further in view of Luu (US 2002/0023963) (hereinafter Luu).

Regarding claim 28, Dwyer in view of Shavit does not disclose a card comprising the electronic module of claim 27. However, Luu discloses a card comprising the electronic module of claim 20 (Luu: see figure 5 A-B and paragraph 0024). Therefore, it would have been obvious to a person skilled art at the time the invention was made to have included in Dwyer in view of Shavit the feature of Luu as discussed above for providing access to goods, services, and information (Luu: paragraph 0003).

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TRANG DOAN whose telephone number is (571)272-0740. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Trang Doan/
Examiner, Art Unit 2431

/Christopher A. Revak/

Primary Examiner, Art Unit 2431